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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,558	07/22/2003	Hiroyuki Sakuyama	240631	6041

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

DO, ANH HONG

ART UNIT	PAPER NUMBER
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2624

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/05/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/05/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No. •

10/623,558

Applicant(s)

SAKUYAMA ET AL.

Examiner

ANH H. DO

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 16, 17, 22-24, 27-29, 32-37, 50, 51, 56-58, 61-63, 67, and 68 is/are rejected.
- 7) ☒ Claim(s) 4-15, 18-21, 25, 26, 30, 31, 38-49, 52-55, 59, 60, 64 and 65 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/22/03,
11/18/03, 1/27/04, 1/26/06.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 27-32 and 61-66 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 27-32 and 61-66 are drawn to a computer implemented process that merely manipulates data or an abstract idea, or merely solves a mathematical problem without a limitation to a practical application in the technological arts.

In order for a claimed invention to accomplish a practical application, it must produce a "useful, concrete and tangible result" *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02 (see MPEP 2106.II.A). A practical application can be achieved through recitation of "a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan", or "limited to a practical application within the technological arts" (MPEP 2106 IVB2(b)). Currently, claims 27-32 and 61-66 meet neither of these criteria. In order to for the claimed process to produce a "useful,

concrete and tangible' result, recitation of one or more of the following elements is suggested:

- * The manipulation of data that represents a physical object or activity transformed from outside the computer (MPEP 2106 IVB2(b)(i)).
- * A recitation of a physical transformation outside the computer, for example in the form of pre or post computer processing activity (MPEP 2106 IVB2(b)(i)).
- * A direct recitation of a practical application in the technological arts (MPEP 2106 IVB2(b)(ii)).

4. Claims 33, 34, 67 and 68 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 33, 34, 67 and 68 define a computer based structural organization embodying functional descriptive material. However, the claims do not define a computer readable medium or memory and is thus non-statutory for that reason (i.e., "when functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed a computer based structural organization can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The Examiner suggests amending the claims to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claims 33, 34, 67 and 68 are also rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 33, 34, 67 and 68 are drawn to computer programs. However, the program/algorithm itself merely manipulates data or an abstract idea, or merely solves a mathematical problem without a limitation to a practical application in the technological arts. MPEP.IV.B2(a) (statutory Product Claims) states:

“A claim limited to a... manufacture, which has a practical application in the technological arts, is statutory.”

In order for a claimed invention to accomplish a practical application, it must produce a “useful, concrete and tangible result”, *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02 (see MPEP 2106.II.A). Currently, the claims do not recite a practical application. In order for the claimed product to produce a ‘useful, concrete and tangible’ result, recitation of one or more of the following element is suggested:

- The manipulation of data that represents a physical object or activity transformed from outside the computer (MPEP 2106.IV.B2(b)(i)).
- A physical transformations outside the computer, for example in the form of pre or post computer processing activity (MPEP 2106.IV.B2(b)(i)).
- A direct recitation of a practical application in the technological arts (MPEP 2106.IV.B2(b)(ii)).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 16, 17, 22, 23, 27-29, 32-37, 50, 51, 56, 57, 61-63, and 66-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naoki et al. (2002-185911) in view of Takeshi (2000-069421).

Regarding claim 1, Naoki discloses:

- means for obtaining information for determining a data amount reduction remaining force of image data (Abstract: means for detecting a remaining capacity of the recorder);

- means for performing a data amount reduction process against the image data (Abstract: means for compressing video data of the program at a compression rate so as to decrease the quantity of data).

Naoki does not disclose expressly means for recording image data in a recording medium and means for selecting image data determined to have large data amount reduction remaining force based on the obtained information with priority.

Takeshi discloses:

- means for recording image data in a recording medium (Abstract: means for recording image data which is stored in a frame memory 16 into the storage medium 33);

- means for selecting image data determined to have large data amount reduction remaining force based on the obtained information with priority (Abstract:

means for retrieving the image data with large display frequency when a required image to be displayed is retrieved).

Naoki & Takeshi are combinable because they are from system for saving storage capacity.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to employ "means for recording image data in a recording medium" and "means for selecting image data determined to have large data amount reduction remaining force based on the obtained information with priority" taught by Takeshi in Naoki.

The suggestion/motivation for doing so would have been to efficiently use a recorder for a broadcast receiver that can record video audio data to the recorder (see Naoki, Abstract).

Therefore, it would have been obvious to combine Naoki with Takeshi to obtain the invention as specified in claim 1.

Regarding claim 27, since this is a method claim corresponding to the system claim 1, the discussion of claim 1 is applied hereto.

Similarly, the discussion of claim 1 is applied to claims 33 and 34.

Regarding claims 2, 3, 16, 17, 28, 29, Naoki teaches compressing image data and image data having a large value of an amount of present code are determined as image data having a large data amount reduction remaining force (i.e., when the residual capacity of the recorder is discriminated to be less) (see Abstract: Solution).

Regarding claims 22 and 32, Takeshi teaches selecting a criterion of display frequency from large and small display frequencies (Abstract).

Regarding claim 23, Naoki teaches compression is a designation of the data amount reduction method (Abstract).

Regarding claims 35-37, 50, 51, 56, 57, 61-63, 66-68, there is a design choice since JPEG 2000 is well-known in the art for applying a coding way.

7. Claims 24 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naoki (2002-185911) in view of Takeshi (2000-069421) as applied to claims 1 above, and further in view of Toshiya (2002044601).

Regarding claim 24, Naoki teaches:

- means for compressing image data (Abstract: compressing video data).

And Takeshi teaches:

- wherein the compressed image data are recording in a recording medium 33 (Abstract).

Naoki and Takeshi do not disclose expressly means for photographing a subject to be photographed and inputting the image data.

Toshiya teaches means for photographing a subject to be photographed and inputting the image data (Abstract: photographed images and inputting them in the display means 30).

Naoki & Takeshi and Toshiya are combinable because they are from system for processing image.

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At the time of the invention, it would have been obvious to a person of ordinary skill in the art to employ "means for photographing a subject to be photographed and inputting the image data" taught by Toshiya in the Naoki & Takeshi's system.

The suggestion/motivation for doing so would have been to efficiently use a recorder for a broadcast receiver that can record video audio data to the recorder (see Naoki, Abstract).

Therefore, it would have been obvious to combine Toshiya with Naoki & Takeshi to obtain the invention as specified in claim 24.

Regarding claim 58, there is a design choice since JPEG 2000 is well-known in the art for applying a coding way.

Allowable Subject Matter

8. Claims 4-15, 18-21, 25, 26, 30, 31, 38-49, 52-55, 59, 60, 64 and 65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 4 and 30, the prior art, taken either singly or in combination, does not teach:

- image data having a large value of "an amount of present code/ a total number of non-zero bitplanes" are determined as image data having the large data amount reduction remaining force.

Regarding claims 38 and 64, since these claims depend upon claims 4 and 30, respectively, they are also objected fro the same reason.

Regarding claim 5, the prior art, taken either singly or in combination, does not teach:

- image data having a small value of "sum of truncated bitplanes or sum of truncated subbitplanes" are determined as image data having the large data amount reduction remaining force.

Regarding claims 6-9 and 39-43, since these claims depend upon claim 5, they are also objected for the same reason.

Regarding claim 10, the prior art, taken either singly or in combination, does not teach:

- the value of "sum of quantization errors" is determined considering the truncated bitplanes or truncated subbitplanes and quantization step sizes.

Regarding claims 11-14 and 44-48, since these claims depend upon claim 10, they are also objected for the same reason.

Regarding claims 15 and 31, the prior art, taken either singly or in combination, does not teach:

- image data having a small total number of non-zero bitplanes are determined as image data having the large data amount reduction remaining force.

Regarding claims 49 and 65, since these claims depend upon claims 15 and 31, respectively, they are also objected fro the same reason.

Regarding claim 18, the prior art, taken either singly or in combination, does not teach:

- image data having a small number of times of using an application of the data amount reduction process are determined as image data having the large data amount reduction remaining force.

Regarding claim 52, since this claim depends upon claim 18, it is also objected fro the same reason.

Regarding claim 19, the prior art, taken either singly or in combination, does not teach:

- it is determined that the data amount reduction remaining force of the image data of a motion picture is greater than the data amount reduction remaining force of image data of a still picture.

Regarding claim 53, since this claim depends upon claim 19, it is also objected fro the same reason.

Regarding claim 20, the prior art, taken either singly or in combination, does not teach:

- image data of motion pictures having a larger average value or maximum of the "present code" / "an amount of lossless code" are determined as image data having the large data amount reduction remaining force.

Regarding claim 54, since this claim depends upon claim 20, it is also objected fro the same reason

Regarding claim 21, the prior art, taken either singly or in combination, does

not teach:

- it is determined that the data amount reduction remaining force of the image data having a designation of the data amount reduction process is greater than the data amount reduction remaining force of the image data not having a designation of the data amount reduction process.

Regarding claim 55, since this claim depends upon claim 21, it is also objected fro the same reason

Regarding claim 25, the prior art, taken either singly or in combination, does not teach:

- means for controlling the data amount reduction process for the recorded image data in a case where the lack of unused capacity is detected by means for detecting.

Regarding claims 26, 59 and 60, since these claim depend upon claim 25, they are also objected for the same reason.

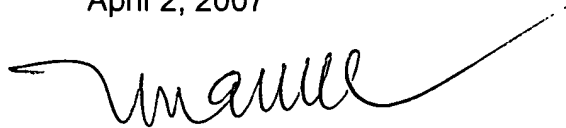
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH H. DO whose telephone number is 571-272-7433. The examiner can normally be reached on 5/4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EILEEN LILLIS can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 2, 2007

A handwritten signature in black ink, appearing to read 'Anh Hong Do', with a long, sweeping horizontal line extending to the right.

ANH HONG DO
PRIMARY EXAMINER